

AQUEOUS ALUMINUM BRAZING COMPOSITION,  
ALUMINUM MATERIAL COATED WITH THE BRAZING COMPOSITION,  
BRAZING METHOD USING THE ALUMINUM MATERIAL, AND  
AUTOMOTIVE HEAT EXCHANGER MANUFACTURED BY  
USING THE BRAZING METHOD

## ABSTRACT

An aqueous aluminum brazing composition containing an organic binder and a zinc-based flux which prevents the precipitation of the zinc-based flux having a large specific gravity while securing an excellent brazeability. The thixotropic index of the brazing composition is adjusted to 1.01-1.20 by adding a (meth)acrylic acid/(meth)acrylate copolymer emulsion to the brazing composition as a precipitation inhibitor in an amount of 0.03-1.50 wt% of 100 wt% of the brazing composition. Since the (meth)acrylic acid/(meth)acrylate copolymer emulsion is used as the precipitation inhibitor in a specific amount instead of other types of compounds used for a powder-containing paint, such as ultrafine particle silica, poly(meth)acrylate, or polyvinyl alcohol, the precipitation of the zinc-based flux can be prevented without impairing the brazeability.